Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of treating a spent potliner after use in an aluminum smelting process, the method comprising crushing and classifying the spent potliner, placing the classified and crushed spent potliner in a furnace at a temperature greater than 450°C, heating the spent potliner to a temperature greater than 450°C, mixing the heated spent potliner with water to neutralize reactive compounds in the spent pot liner, and produce reaction gases and residue, burning the reaction gases, mixing the residue with water in a well ventilated area for a period of weeks to cure the residue, and blending the cured residue with other chemicals and minerals to provide useful mineral products.

2. (Canceled)

3. (Currently Amended) The method according to ~~either~~ claim 1 wherein the classified and crushed spent potliner is positioned in a rotary kiln into which air is introduced to ensure an oxygen enriched environment.

4. (Original) The method according to claim 3 comprising using thermocouples to control the temperature of the kiln.

5. (Currently Amended) The method according to claim 3 comprising directing jets of air into the kiln to prevent agglomeration.

6. (Currently Amended) The method according to ~~any one of the preceding~~ claim~~s~~ 1 comprising exposing the wet mixture in a pile to ambient conditions between 5 and 20°C in a well ventilated location.

7. (Original) The method according to claim 6 comprising mixing the pile on a daily basis with total exposure being up to four weeks.

8. (Currently Amended and withdrawn) A plant for processing ~~spend~~ spent potliners according to the method of claim 1.

9. (Currently Amended and withdrawn) Mineral products comprising chemicals and minerals blended with residue treated by the method in accordance with ~~any one of~~ claim 1.

10. (Original and withdrawn) A mineral product according to claim 9 wherein the treated residue is blended with refractory brick waste, crushed anode carbon, dross powder and supplemented with black and/or brown coal and sand in proportion varying in accordance with the end use of the mineral product.